REU Site: Engineering research in a liberal arts and entrepreneurship context

Details on Additional Programming

In addition to research in faculty labs, the REU Site students will participate in significant programming aimed at developing their research skills and at aiding them in placing their research in wider contexts. A sample weekly schedule is outlined in the table below, and each of the components is described in more detail below.

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	Research	Research	Research	Research	Research
Lunch & Programming	REU-Specific Prog.	Union Summer Res. Prog.	REU-Specific Prog.	Union Summer Res. Prog	Open Office Hour
Afternoon	Research	Research	U-Corps Cust. Discovery	Research	Research
Evening	U-Corps Meeting (3 hours, once per week)				

Union Summer Research Programming:

The Union REU Site students will participate in seminars on Tuesdays and Thursdays with other Union College undergraduate research students. Student researchers give short presentations on their research projects at the Tuesday sessions, while the Thursday sessions cover a range of professional development topics, including crafting resumes, navigating job hunts, pursuing scholarships and fellowships, and the graduate school application process.

REU-Specific Programming:

The Union REU Site students will participate in REU-specific cohort-building lunch/programming on Mondays and Wednesdays. The REU-specific programming will include workshops, interactive lectures, and other activities. Workshops will focus on engineering/research ethics, data analysis, and effective writing/communication in engineering. For community college students, the programming will include workshops on applying and transitioning to four-year programs; these workshops will focus on the application process and strategies for seamless transition and will feature Union admission staff and community college alums who have successfully transitioned to four-year programs. The programming will also include workshops aimed at exposing students to graduate school, including details of the application process and a panel with graduate students. The programming will also include lectures on bridging STEM with liberal arts and aid STEM students in considering the social context of their work.

U-Corps Activities:

These activities are designed to complement the research experience by helping students place their research in wider contexts (e.g., societal impacts, applications, and potential commercialization). The goal is to provide the students with a way of thinking about how research results can be translated from the lab to the marketplace through tangible societal/customer needs for their research. U-Corps (modeled

after NSF's I-Corps™) will focus on aspects of the business canvas model, customer discovery, and product-market fit. During the first three weeks of the summer, the evening meetings will focus on developing a commercialization or societal impact idea related to the research projects. Students will be organized into teams, and each team will be paired with a local entrepreneur who will serve as a business mentor. Each team will develop multiple ideas and select one for further pursuit. During weeks four to seven, the students will learn about different aspects of the lean-launch pad program, perform customer discovery, and present their findings to the entire team. Through interactive lectures, students will also learn about value propositions, customer segments, and storytelling; students will also engage with local entrepreneurs and learn from their experiences. In the final week, the students will present their findings to a larger audience.